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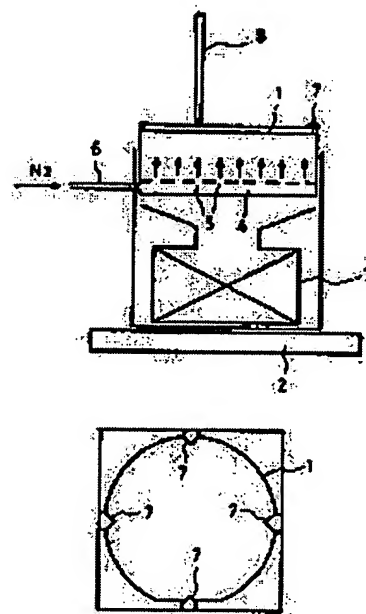
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## (54) LASER ANNEALING METHOD

### (57)Abstract:

**PURPOSE:** To execute a laser annealing with less limitaiton in preheating temperature by floating a sample to be treated to a predetermined position by means of an inert gas flow and preheating the sample by a microwave heating method.

**CONSTITUTION:** A sample 1 is placed on a gas injection board 4 with its poly-Si layer directed upward, and N<sub>2</sub> of 100° C is introduced from a port 6 and jetted out from holes 5. This causes the sample to float up to contact pawls. Next the sample 1 is heated up to approximately 400°C by operating a high-frequency power source 3. If the sample 1 is heated up, the gas injection board does not absorb the microwave and its temperature is not raised up because it is a hollow flat construction which is made of glass plate etc. Furthermore, as the radiating direction of the high-frequency power source 3 can be limited only toward the sample 1 by an adequate designing, an XY table 2 is not also heated up. Anything other than the sample 1 is not heated up, and the sample 1 is under non-contact state except against the pawls 7, accordingly the sample can be heated up to any



*required temperature without thermal conduction from the sample. Then, the poly-Si is heated up to the order of 1,400°C by irradiation of a CW laser 8, and a single crystal can be obtained without any influence onto the device.*

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#### LEGAL STATUS

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